

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

NOV 24 2009

CERTIFIED MAIL 7009 2250 0003 8966 0496
RETURN RECEIPT REQUESTED

File No.: LA0007901
AI No.: 38936
Activity No.: PER20080005

Mr. Alban Bush, Environmental Manager
TIN, Inc. d/b/a Temple-Inland
Bogalusa Paperboard Mill
Post Office Box 1060
Bogalusa, Louisiana 70427-1060

RE: Draft Major Modification of Louisiana Pollutant Discharge Elimination System (LPDES)
Permit LA0007901 (effective July 1, 2006) issued to TIN, Inc. d/b/a Temple-Inland, Bogalusa
Paperboard Mill.

Dear Mr. Bush:

The Louisiana Department of Environmental Quality (LDEQ) is in receipt of a permit modification request dated August 20, 2008, requesting that LPDES permit LA0007901 be modified to reflect the changes indicated below. After reviewing this request, this Office is proposing to grant the following modifications:

1. A revision of the monitoring frequency for pH at Outfall 001 from once per day to three times per week. A monitoring frequency of once per day in lieu of three times per week was initially requested by the United States Fish and Wildlife Service (FWS) to ensure that the limits and monitoring requirement for pH were protective of the Ringed Map Turtle, the Gulf Sturgeon, and their designated habitats and to verify if future discharges have the potential to impact these resources. However, based on information received via an email correspondence on September 5, 2007, the FWS has no objection to the monitoring frequency reduction and removal of the Part II Conditions (Part II.M) associated with it. In support of this decision, a No Objection letter (dated April 15, 2008) was sent to the permittee from the LDEQ which terminated the reporting requirements under Part II.M since the requirements had been satisfied. Therefore, LDEQ is proposing to change the monitoring frequency for pH at Outfall 001 to reflect three times per week and remove Part II.M from the permit. See Part I, pages 2 and 6 of the draft permit modification.
2. A revision of the mass limits for the conventional, volatile, acid, and base/neutral parameters based on an updated flow rate for the Chemical Plant's contribution to the overall flow at Outfall 001. These limits and requirements will be identified as Phase I in the draft permit modification. This update will also result in a revision to Appendices A (Calculation of Technology-Based Limits Spreadsheet) and B (Reasonable Potential Analysis). A footnote will be added to Part I, page 5 (Phase I) of the draft permit modification which requires the permittee to notify the LDEQ prior to discharging under the Phase II requirements. See Part

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I, pages 2 - 5, Part II.I and Appendices A (A-1 through A-2) and B (B-1 and B-3) of the draft permit modification.

3. A revision to include an additional phase (Phase II) in the permit that establishes mass limits for the conventional parameters based on a change in flow rate which is anticipated to occur as a result of the shutdown and decommissioning of the Chemical Plant in 2010. Therefore, during Phase II, there will no longer be any discharges from the Chemical Plant which will result in the removal of the following requirements from the permit: (1) the wastestream description for process wastewater from the dimethyl sulfide and dimethyl sulfoxide manufacturing plant and (2) the allocations and/or limits and monitoring requirements for the OCPSF parameters cited at 40 CFR 414, Subparts H and I. This update will also result in a revision to Appendices A (Calculation of Technology-Based Limits Spreadsheet) and B (Reasonable Potential Analysis). See Part I, pages 6 - 7, Part II.I and Appendices A (A-3) and B (B-2 and B-3) of the draft permit modification.
4. The addition of a provision in the Part II Conditions of the permit that requires the permittee to notify the LDEQ within 30 days after the shutdown of the Chemical Plant. In addition, a second provision will be added that allows the permittee to discharge under the Phase II requirements after completing an OCPSF-parameter monitoring event which demonstrates compliance with the OCPSF mass limits under Phase I. This monitoring event will be initiated 60 days following the shutdown of the Chemical Plant and cessation of discharge of any OCPSF regulated wastewaters. See Part I, page 5 and Part II.I of the draft permit modification.

Please be advised that the following changes have been made to the permit in addition to the changes requested by the permittee above:

- a. The outfall description for Outfall 001 (Phases I and II) will be updated to include contaminated groundwater from a groundwater remediation project. In support of this decision, a No Objection letter (dated August 22, 2007) was sent to the permittee from the LDEQ which approved the discharges of this wastestream from this outfall. See Part I, pages 2 and 6 of the draft permit modification.
- b. The footnotes for the biomonitoring requirements in Part I of the permit will be changed to correspond to the appropriate paragraph in accordance with Item c below. See Part I, pages 5 and 7 of the draft permit modification.
- c. All of the pages under the Part II Conditions will be renumbered due to changes that resulted from the inclusion or removal of language in this section of the permit. See Part II, pages 1 - 22 of the draft permit modification.
- d. The language in Part II.K will be updated to reflect the facility's coverage under the current Multi-Sector General Permit.
- e. The standard DMR language in Part II.L will be changed to incorporate wording that allows the submittal of electronic DMRs. In the addition, the provision in this section that required submittal of DMRs to the Southeast Regional Office will be removed.

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from the permit since all DMRs sent to the Office of Environmental Compliance - Permit Compliance Unit are now scanned into EDMS which is accessible to all LDEQ personnel. See Part II.L of the draft permit modification.

- f. The biomonitoring requirements in Part II.M (previously Part II.N) will be updated in accordance with current U.S. Environmental Protection Agency, Region 6 (USEPA) policy and biomonitoring protocol. In addition, this section will be updated to remove the requirement to report biomonitoring data on a DMR as TX1. Biomonitoring data shall be reported on a DMR as Outfall 001. This section will also include the dilution series that correspond to the Phase I and II requirements. See Appendix C for the updated Biomonitoring Recommendation.
- g. The Water Quality Spreadsheet (Appendix B-1) was updated to reflect the correct sample values and/or input variables for Total Phenols, Total Copper, and Total Zinc based on the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards. These values will also be included in Appendix B-2, as well.

Enclosed is the modified title page, modified Part I (pages 2 - 7), and modified Part II (pages 1 - 22). Please note that this is a DRAFT PERMIT MODIFICATION only. Authorization to add these conditions will be granted only upon receipt of an approved modification from this Office. All other conditions of LPDES permit LA0007901 shall continue unchanged and remain valid until the expiration date of the permit. In accordance with LAC 33:IX.3105.B2, only those permit limits and/or conditions pertaining to the draft modification are open for public comment.

This Office will publish a public notice one time in a local newspaper of general circulation and the Office of Environmental Services Public Notice Mailing List. A copy of the public notice containing the specific requirements for commenting to this draft permit action will be sent under separate cover at the time the public notice is arranged. In accordance with LAC 33:IX.6521.A, the applicant shall receive and is responsible for paying the invoice from the above mentioned newspaper. LAC 33:IX.6521.A states: "...the costs of publication shall be borne by the applicant."

The invoice, fee rating worksheet, and a copy of the fee regulations will be sent under a separate cover letter as applicable. Please note that a copy of the fee rating worksheet is also attached to this draft permit. A copy of the entire Louisiana Water Quality Regulations may be obtained from the LDEQ Office of Environmental Assessment, Post Office Box 4314, Baton Rouge, Louisiana 70821-4314, (225) 219-3236.

Pursuant to LAC 33:IX.1309.I, LAC 33:IX.6509.A.1, and LAC 33:I.1701, you must pay any outstanding fees to the Department. Therefore, you are encouraged to verify the facility's fee status by contacting LDEQ's Office of Management and Finance, Financial Services Division (225) 219-3863. Failure to pay in the manner and time prescribed could result in applicable enforcement actions as prescribed in the Environmental Quality Act, including, but not limited to revocation or suspension of the applicable permit, and/or assessment of a civil penalty against you.

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Should you have any questions concerning any part of the DRAFT PERMIT MODIFICATION, public notice requirements, or fee, please feel free to contact Sonja Loyd, Office of Environmental Services, at the address on the cover letter or by telephone at (225) 219-3090. To ensure that all correspondence regarding this facility is properly filed into the Department's Electronic Document Management System, please reference your Agency Interest (AI) number 38936 and LPDES permit number LA0007901 on all future correspondence to this Department.

Sincerely,



Jesse Chang
Environmental Scientist Manager
Industrial Water Permits

Attachments: draft permit modification and fact sheet

c: IO-W File

Sonja Loyd
Water Permits Division

Aimee Killeen
Providence Engineering and Environmental
Group LLC
aimeekilleen@providenceeng.com

cc: Public Participation Group (for public notice)
Office of Environmental Assistance

Jenniffer Sheppard
Water Permits Division

Permit Compliance Unit
Southeast Regional Office
Office of Environmental Compliance

Gayle Denino
Office of Management & Finance

Supervisor, Louisiana Field Office
U.S. Fish and Wildlife Service

Public Health Chief Engineer
Office of Public Health
Department of Health and Hospitals

DRAFT

PERMIT NUMBER

LA0007901

AI No.: 38936



OFFICE OF ENVIRONMENTAL SERVICES
Water Discharge Permit

Pursuant to the Clean Water Act, as amended (33 U.S.C. 1251 et seq.), and the Louisiana Environmental Quality Act, as amended (La. R. S. 30:2001 et seq.), rules and regulations effective or promulgated under the authority of said Acts, and in reliance on statements and representations heretofore made in the application, a Louisiana Pollutant Discharge Elimination System permit is issued authorizing

TIN, Inc. d/b/a Temple-Inland
Bogalusa Paperboard Mill
Post Office Box 1060
Bogalusa, Louisiana 70427-1060

Type Facility: Unbleached kraft paper mill, container plant, and dimethyl sulfide and dimethyl sulfoxide manufacturing plant

Location: Fourth Street in Bogalusa
Washington Parish

Receiving Waters: Pearl River (Subsegment No. 090101)

to discharge in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III attached hereto.

This permit and the authorization to discharge was effective on July 1, 2006, and shall expire at midnight on June 30, 2011.

This permit was not previously modified.

This modification shall become effective on _____

Issued on _____

Cheryl Sonnier Nolan
Assistant Secretary

PART I

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date of the permit modification and lasting through shutdown of Chemical Plant, cessation of the discharge of OCPSF regulated wastewater, and completion of the OCPSF monitoring event (*1) the permittee is authorized to discharge from:

Outfall 001 (Phase I), the continuous discharge of treated combined process wastewater from the kraft pulp and paper mill, linerboard mill, and dimethyl sulfide and dimethyl sulfoxide manufacturing plant; container plant wastewater; boiler and cooling tower blowdown; sludge dewatering liquid; lime kiln scrubber and boiler scrubber wastewater; miscellaneous wastewaters (comprised of wastewater from shops and offices); sanitary wastewater; contaminated groundwater from a groundwater remediation project, and process area stormwater

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	STORET Code	Discharge Limitations		Monitoring Requirements		Measurement Frequency	Sample Type
		Other Units					
		(lbs/day, UNLESS STATED)		(ug/L, UNLESS STATED)			
CONVENTIONAL		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum		
Flow-MGD	50050	Report	Report	---	---	Continuous	Recorder
BOD ₅	00310	18,431	37,512	---	---	3/week	24-hr. Composite
TSS	00530	36,452	73,998	---	---	3/week	24-hr. Composite
Oil and Grease	03582	---	2,802	---	---	1/quarter	Grab
pH Min/Max Values (Standard Units)	00400	---	---	6.0 (*2)	9.0 (*2)	3/week	Grab
VOLATILE COMPOUNDS							
Acrylonitrile	34215	1.52	3.83	---	---	1/year	24-hr. Composite
Benzene	34030	0.59	2.16	---	---	1/year	24-hr. Composite
Carbon Tetrachloride	32102	0.29	0.60	---	---	1/year	24-hr. Composite
Chlorobenzene	34301	0.24	0.44	---	---	1/year	24-hr. Composite
Chloroethane	85811	1.65	4.25	---	---	1/year	24-hr. Composite
Chloroform	32106	0.33	0.73	---	---	1/year	24-hr. Composite
1,1-Dichloroethane	34496	0.35	0.93	---	---	1/year	24-hr. Composite
1,2-Dichloroethane	32103	1.08	3.34	---	---	1/year	24-hr. Composite
1,1-Dichloroethylene	34501	0.25	0.40	---	---	1/year	24-hr. Composite
1,2-trans-Dichloro-ethylene	34546	0.33	0.86	---	---	1/year	24-hr. Composite
1,2-Dichloropropane	34541	2.42	3.64	---	---	1/year	24-hr. Composite
1,3-Dichloropropylene	51044	0.46	0.70	---	---	1/year	24-hr. Composite
Ethylbenzene	34371	0.51	1.71	---	---	1/year	24-hr. Composite
Methyl Chloride	34418	1.36	3.01	---	---	1/year	24-hr. Composite
Methylene Chloride	34423	0.63	1.41	---	---	1/year	24-hr. Composite
Tetrachloroethylene	34475	0.35	0.89	---	---	1/year	24-hr. Composite
Toluene	34010	0.41	1.27	---	---	1/year	24-hr. Composite
1,1,1-Trichloroethane	34506	0.33	0.86	---	---	1/year	24-hr. Composite
1,1,2-Trichloroethane	34511	0.33	0.86	---	---	1/year	24-hr. Composite
Trichloroethylene	39180	0.33	0.86	---	---	1/year	24-hr. Composite
Vinyl Chloride	39175	1.65	4.25	---	---	1/year	24-hr. Composite

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001 - Phase I continued)

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	STORET Code	Other Units				Measurement Frequency	Sample Type
		(lbs/day, UNLESS STATED)		(ug/L, UNLESS STATED)			
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum		
<u>ACID COMPOUNDS</u>							
2-Chlorophenol	34586	0.49	1.55	---	---	1/year	24-hr. Composite
2,4-Dichlorophenol	34601	0.62	1.77	---	---	1/year	24-hr. Composite
2,4-Dimethylphenol	34606	0.29	0.57	---	---	1/year	24-hr. Composite
4,6-Dinitro-o-Cresol	34657	1.24	4.39	---	---	1/year	24-hr. Composite
2,4-Dinitrophenol	34616	1.13	1.95	---	---	1/year	24-hr. Composite
2-Nitrophenol	34591	0.65	1.09	---	---	1/year	24-hr. Composite
4-Nitrophenol	34646	1.14	1.96	---	---	1/year	24-hr. Composite
Phenol	34694	0.24	0.41	---	---	1/year	24-hr. Composite
<u>BASE NEUTRAL COMPOUNDS</u>							
Acenaphthene	34205	0.35	0.93	---	---	1/year	24-hr. Composite
Acenaphthylene	34200	0.35	0.93	---	---	1/year	24-hr. Composite
Anthracene	34220	0.35	0.93	---	---	1/year	24-hr. Composite
Benzo(a)anthracene	34526	0.35	0.93	---	---	1/year	24-hr. Composite
Benzo(a)pyrene	34247	0.36	0.97	---	---	1/year	24-hr. Composite
3,4-Benzofluoranthene	34230	0.36	0.97	---	---	1/year	24-hr. Composite
Benzo(k)fluoranthene	34242	0.35	0.93	---	---	1/year	24-hr. Composite
Bis(2-ethylhexyl)- phthalate	39100	1.63	4.42	---	---	1/year	24-hr. Composite
Chrysene	34320	0.35	0.93	---	---	1/year	24-hr. Composite
1,2-Dichlorobenzene	34536	1.22	2.58	---	---	1/year	24-hr. Composite
1,3-Dichlorobenzene	34566	0.49	0.70	---	---	1/year	24-hr. Composite
1,4-Dichlorobenzene	34571	0.24	0.44	---	---	1/year	24-hr. Composite
Diethyl phthalate	34336	1.28	3.22	---	---	1/year	24-hr. Composite
Dimethyl phthalate	34341	0.30	0.74	---	---	1/year	24-hr. Composite
Di-n-butyl phthalate	39110	0.43	0.90	---	---	1/year	24-hr. Composite
2,4-Dinitrotoluene	34611	1.79	4.52	---	---	1/year	24-hr. Composite
2,6-Dinitrotoluene	34626	4.04	10.16	---	---	1/year	24-hr. Composite
Fluoranthene	34376	0.40	1.08	---	---	1/year	24-hr. Composite
Fluorene	34381	0.35	0.93	---	---	1/year	24-hr. Composite
Hexachlorobenzene	39700	0.005	0.012	---	---	1/year	24-hr. Composite
Hexachlorobutadiene	34391	0.32	0.78	---	---	1/year	24-hr. Composite
Hexachloroethane	34396	0.33	0.86	---	---	1/year	24-hr. Composite
Naphthalene	34696	0.35	0.93	---	---	1/year	24-hr. Composite
Nitrobenzene	34447	0.43	1.08	---	---	1/year	24-hr. Composite
Phenanthrene	34461	0.35	0.93	---	---	1/year	24-hr. Composite
Pyrene	34469	0.40	1.06	---	---	1/year	24-hr. Composite
1,2,4-Trichlorobenzene	34551	1.08	2.22	---	---	1/year	24-hr. Composite

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001 - Phase I continued)

<u>Effluent Characteristic</u>			<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>		
<u>WHOLE EFFLUENT (CHRONIC)</u>			(Percent %, UNLESS STATED)				
<u>TOXICITY TESTING (*3)</u>	STORET Code		Monthly Minimum	Avg 7-Day Minimum	Measurement Frequency (*4)	Sample Type	
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TLP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TOP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TPP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Pass/Fail [0/1], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TGP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TQP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TLP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic <u>Ceriodaphnia dubia</u>	TOP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TPP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Pass/Fail [0/1], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TGP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TQP3B	---	---	Report	Report	1/quarter	24-hr. Composite

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001 - Phase I continued)

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 001, at the point of discharge from the still basin into the 72" conduit pipe to the Pearl River, prior to discharge from the multiport diffuser in the Pearl River (Latitude 30°46'32", Longitude 89°49'43").

FOOTNOTES:

- (*1) The permittee shall notify the Office of Environmental Services, the Office of Environmental Compliance - Permit Compliance Unit, and the Southeast Regional Office in writing within 30 days after the shutdown of the Chemical Plant. The permittee shall discharge under the Phase II requirements after completing an OCPSF monitoring event which demonstrates compliance with the OCPSF mass limits under Phase I. This monitoring event shall be initiated 60 days after the shutdown of the Chemical Plant and cessation of discharge of any OCPSF regulated wastewaters. See Part II.I.
- (*2) The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous pH values measured.
- (*3) See Part II, Paragraph M for Biomonitoring requirements.
- (*4) If there are no significant lethal or sub-lethal effects demonstrated to the species at or below the critical dilution during the first four quarters of testing, the permittee may certify fulfillment of the WET testing requirements in writing to the permitting authority and WET testing may be reduced to not less than once per six months for the more sensitive species and not less than once per year for the less sensitive species for the remainder of the life of the permit. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both species reverts to once per quarter until the permit is reissued. See Part II, Paragraph M, Section 5 (Monitoring Frequency Reduction).

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

During the period beginning shutdown of Chemical Plant, cessation of the discharge of OCPSF regulated wastewater, and completion of the OCPSF monitoring event and lasting through the expiration date the permittee is authorized to discharge from:

Outfall 001 (Phase II), the continuous discharge of treated combined process wastewater from the kraft pulp and paper mill and linerboard mill; container plant wastewater; boiler and cooling tower blowdown; sludge dewatering liquid; lime kiln scrubber and boiler scrubber wastewater; miscellaneous wastewaters (comprised of wastewater from shops and offices); sanitary wastewater; contaminated groundwater from a groundwater remediation project, and process area stormwater

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>		<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
		Other Units					
		(lbs/day, UNLESS STATED)		(ug/L, UNLESS STATED)			
<u>CONVENTIONAL</u>	STORET Code	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow-MGD	50050	Report	Report	---	---	Continuous	Recorder
BOD ₅	00310	17,718	35,610	---	---	3/week	24-hr. Composite
TSS	00530	35,549	71,098	---	---	3/week	24-hr. Composite
Oil and Grease	03582	---	2,565	---	---	1/quarter	Grab
pH Min/Max Values (Standard Units)	00400	---	---	6.0 (*1) (Min)	9.0 (*1) (Max)	3/week	Grab
<u>WHOLE EFFLUENT (CHRONIC)</u>		<u>(Percent %, UNLESS STATED)</u>					
<u>TOXICITY TESTING (*2)</u>	STORET Code			Monthly Minimum	Avg 7-Day Minimum	Measurement Frequency (*3)	Sample Type
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TLP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TOP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TPP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Pass/Fail [0/1], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TGP6C	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	TQP6C	---	---	Report	Report	1/quarter	24-hr. Composite

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EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001 - Phase II continued)

<u>WHOLE EFFLUENT (CHRONIC)</u>				(Percent %, UNLESS STATED)			
<u>TOXICITY TESTING (*2)</u>	STORET Code			Monthly Minimum	Avg 7-Day Minimum	Measurement Frequency (*3)	Sample Type
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TLP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic <u>Ceriodaphnia dubia</u>	TOP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TPP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Pass/Fail [0/1], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TGP3B	---	---	Report	Report	1/quarter	24-hr. Composite
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	TQP3B	---	---	Report	Report	1/quarter	24-hr. Composite

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 001, at the point of discharge from the still basin into the 72" conduit pipe to the Pearl River, prior to discharge from the multiport diffuser in the Pearl River (Latitude 30°46'32", Longitude 89°49'43").

FOOTNOTE(S):

- (*1) The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous pH values measured.
- (*2) See Part II, Paragraph M for Biomonitoring requirements.
- (*3) If there are no significant lethal or sub-lethal effects demonstrated to the species at or below the critical dilution during the first four quarters of testing, the permittee may certify fulfillment of the WET testing requirements in writing to the permitting authority and WET testing may be reduced to not less than once per six months for the more sensitive species and not less than once per year for the less sensitive species for the remainder of the life of the permit. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both species reverts to once per quarter until the permit is reissued. See Part II, Paragraph M, Section 5 (Monitoring Frequency Reduction).

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In addition to the standard conditions required in all permits and listed in Part III, the Office has established the following additional requirements in accordance with the Louisiana Water Quality Regulations.

- A. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations or additional restrictions, if necessary, to maintain the water quality integrity and the designated uses of the receiving water bodies.
- B. This permit does not in any way authorize the permittee to discharge a pollutant not listed or quantified in the application or limited or monitored for in the permit.
- C. Authorization to discharge pursuant to the conditions of this permit does not relieve the permittee of any liability for damages to state waters or private property. For discharges to private land, this permit does not relieve the permittee from obtaining proper approval from the landowner for appropriate easements and rights of way.
- D. For definitions of monitoring and sampling terminology see Part III, Section F.
- E. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.6.e.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to the Office of Environmental Compliance within 24 hours from the time the permittee became aware of the violation followed by a written report in five days.

Pollutant(s):

VOLATILE COMPOUNDS

Acrylonitrile
Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
1,2-trans-Dichloroethylene
1,2-Dichloropropane
1,3-Dichloropropylene
Ethylbenzene
Methyl Chloride [Chloromethane]
Methylene Chloride
Tetrachloroethylene

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Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Vinyl Chloride

ACID COMPOUNDS

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-o-Cresol [2-Methyl-4,6-Dinitrophenol]
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
Phenol

BASE/NEUTRAL COMPOUNDS

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
3,4-Benzofluoranthene
Benzo(k)fluoranthene
Bis(2-ethylhexyl) Phthalate
Chrysene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Diethyl Phthalate
Dimethyl Phthalate
Di-n-Butyl Phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
Naphthalene
Nitrobenzene
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene

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F. COMPOSITE SAMPLING (24-HOUR)1. STANDARD PROVISIONS

Unless otherwise specified in this permit, the term "24-hour composite sample" means a sample consisting of a minimum of four (4) aliquots of effluent collected at regular intervals over a normal 24-hour operating day and combined in proportion to flow or a sample continuously collected in proportion to flow over a normal 24-hour operating period.

2. VOLATILE COMPOUNDS

For the "24-hour composite" sampling of volatile compounds using EPA Methods 601, 602, 603, 624, 1624, or any other 40 CFR Part 136 (See LAC 33:IX.4901) method approved after the effective date of the permit, the permittee shall manually collect four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. These aliquots must be combined in the laboratory to represent the composite sample of the discharge. One of the following alternative methods shall be used to composite these aliquots.

- a. Each aliquot is poured into a syringe. The plunger is added, and the volume in the syringe is adjusted to 1-1/4 ml. Each aliquot (1-1/4 ml.) is injected into the purging chamber of the purge and trap system. After four (4) injections (total 5 ml.), the chamber is purged. Only one analysis or run is required since the aliquots are combined prior to analysis.
- b. Chill the four (4) aliquots to 4 Degrees Centigrade. These aliquots must be of equal volume. Carefully pour the contents of each of the four aliquots into a 250-500 ml. flask which is chilled in a wet ice bath. Stir the mixture gently with a clean glass rod while in the ice bath. Carefully fill two (2) or more clean 40 ml. zero head-space vials from the flask and dispose of the remainder of the mixture. Analyze one of the aliquots to determine the concentration of the composite sample. The remaining aliquot(s) are replicate composite samples that can be analyzed if desired or necessary.
- c. Alternative sample compositing methods may be used following written approval by this Office.

The individual samples resulting from the application of these compositing methods shall be analyzed following the procedures specified for the selected test method. The resulting analysis shall be reported as the daily composite concentration.

As an option to the above compositing methods, the permittee may manually collect four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of

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discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. A separate analysis shall be conducted for each discrete grab sample following the approved test methods. The determination of daily composite concentration shall be the arithmetic average (weighted by flow) of all grab samples collected during the 24-hour sampling period.

G. 40 CFR PART 136 (See LAC 33:IX.4901) ANALYTICAL REQUIREMENTS

Unless otherwise specified in this permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136, and in particular, Appendices A, B, and C (See LAC 33:IX.4901).

H. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result is less than the minimum quantification level listed below, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

<u>NONCONVENTIONAL</u>	<u>MQL (µg/L)</u>
Phenolics, Total Recoverable (4AAP)	5
Chlorine (Total Residual)	100
3-Chlorophenol	10
4-Chlorophenol	10
2,3-Dichlorophenol	10
2,5-Dichlorophenol	10
2,6-Dichlorophenol	10
3,4-Dichlorophenol	10
2,4-D	10
2,4,5-TP (Silvex)	4
 <u>METALS AND CYANIDE</u>	 <u>MQL (µg/L)</u>
Antimony (Total)	60
Arsenic (Total)	10
Beryllium (Total)	5
Cadmium (Total)	1
Chromium (Total)	10
Chromium (3+)	10
Chromium (6+)	10
Copper (Total)	10
Lead (Total)	5
Mercury (Total)	0.2
Molybdenum (Total)	30
Nickel (Total) Freshwater	40
Nickel (Total) Marine	5
Selenium (Total)	5
Silver (Total)	2

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Thallium (Total)	10
Zinc (Total)	20
Cyanide (Total)	20
<u>DIOXIN</u>	<u>MQL (µg/L)</u>
2,3,7,8-TCDD	0.00001
<u>VOLATILE COMPOUNDS</u>	<u>MQL (µg/L)</u>
Acrolein	50
Acrylonitrile	50
Benzene	10
Bromoform	10
Carbon Tetrachloride	10
Chlorobenzene	10
Chlorodibromomethane	10
Chloroethane	50
2-Chloroethylvinylether	10
Chloroform	10
Dichlorobromomethane	10
1,1-Dichloroethane	10
1,2-Dichloroethane	10
1,1-Dichloroethylene	10
1,2-Dichloropropane	10
1,3-Dichloropropylene	10
Ethylbenzene	10
Methyl Bromide [Bromomethane]	50
Methyl Chloride [Chloromethane]	50
Methylene Chloride	20
1,1,2,2-Tetrachloroethane	10
Tetrachloroethylene	10
Toluene	10
1,2-trans-Dichloroethylene	10
1,1,1-Trichloroethane	10
1,1,2-Trichloroethane	10
Trichloroethylene	10
Vinyl Chloride	10
<u>ACID COMPOUNDS</u>	<u>MQL (µg/L)</u>
2-Chlorophenol	10
2,4-Dichlorophenol	10
2,4-Dimethylphenol	10
4,6-Dinitro-o-Cresol [2-Methyl-4,6-Dinitrophenol]	50
2,4-Dinitrophenol	50
2-Nitrophenol	20
4-Nitrophenol	50
p-Chloro-m-Cresol [4-Chloro-3-Methylphenol]	10
Pentachlorophenol	50
Phenol	10
2,4,6-Trichlorophenol	10

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<u>BASE/NEUTRAL COMPOUNDS</u>	<u>MQL (µg/L)</u>
Acenaphthene	10
Acenaphthylene	10
Anthracene	10
Benzidine	50
Benzo(a)anthracene	10
Benzo(a)pyrene	10
3,4-Benzofluoranthene	10
Benzo(ghi)perylene	20
Benzo(k)fluoranthene	10
Bis(2-chloroethoxy) Methane	10
Bis(2-chloroethyl) Ether	10
Bis(2-chloroisopropyl) Ether	10
Bis(2-ethylhexyl) Phthalate	10
4-Bromophenyl Phenyl Ether	10
Butylbenzyl Phthalate	10
2-Chloronaphthalene	10
4-Chlorophenyl Phenyl Ether	10
Chrysene	10
Dibenzo(a,h)anthracene	20
1,2-Dichlorobenzene	10
1,3-Dichlorobenzene	10
1,4-Dichlorobenzene	10
3,3'-Dichlorobenzidine	50
Diethyl Phthalate	10
Dimethyl Phthalate	10
Di-n-Butyl Phthalate	10
2,4-Dinitrotoluene	10
2,6-Dinitrotoluene	10
Di-n-octyl Phthalate	10
1,2-Diphenylhydrazine	20
Fluoranthene	10
Fluorene	10
Hexachlorobenzene	10
Hexachlorobutadiene	10
Hexachlorocyclopentadiene	10
Hexachloroethane	20
Indeno(1,2,3-cd)pyrene [2,3-o-Phenylene Pyrene]	20
Isophorone	10
Naphthalene	10
Nitrobenzene	10
n-Nitrosodimethylamine	50
n-Nitrosodi-n-Propylamine	20
n-Nitrosodiphenylamine	20
Phenanthrene	10
Pyrene	10
1,2,4-Trichlorobenzene	10

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<u>PESTICIDES</u>	<u>MQL (µg/L)</u>
Aldrin	0.05
Alpha-BHC	0.05
Beta-BHC	0.05
Gamma-BHC [Lindane]	0.05
Delta-BHC	0.05
Chlordane	0.2
4,4'-DDT	0.1
4,4'-DDE [p,p-DDX]	0.1
4,4'-DDD [p,p-TDE]	0.1
Dieldrin	0.1
Alpha-Endosulfan	0.1
Beta-Endosulfan	0.1
Endosulfan Sulfate	0.1
Endrin	0.1
Endrin Aldehyde	0.1
Heptachlor	0.05
Heptachlor Epoxide [BHC-Hexachlorocyclohexane]	0.05
PCB-1242	1.0
PCB-1254	1.0
PCB-1221	1.0
PCB-1232	1.0
PCB-1248	1.0
PCB-1260	1.0
PCB-1016	1.0
Toxaphene	5.0

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR Part 136 (See LAC 33:IX.4901). For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to this Office a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by this Office, the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

- I. The permittee shall achieve compliance with the effluent limitations and monitoring requirements specified for discharges in accordance with the following schedule: Effective date of the permit modification with the exception of the schedule as identified below.

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ACTIVITY	SCHEDULE
Compliance with the effluent limits and monitoring requirements established in Part I of the permit (page 2) - Outfall 001 Phase I	Beginning the effective date of the permit modification and lasting until the shutdown of the Chemical Plant, cessation of the discharge of any OCPSF regulated wastewaters, and completion of the OCPSF monitoring event
Compliance with the effluent limits and monitoring requirements established in Part I of the permit (page 6) - Outfall 001 Phase II	Beginning the shutdown of the Chemical Plant, cessation of the discharge of any OCPSF regulated wastewaters, and completion of the OCPSF monitoring event and lasting until the expiration date of the permit

The permittee shall notify the Office of Environmental Services, the Office of Environmental Compliance - Permit Compliance Unit, and the Southeast Regional Office in writing within 30 days after the shutdown of the Chemical Plant. The permittee shall discharge under the Phase II requirements after completing an OCPSF monitoring event which demonstrates compliance with the OCPSF mass limits under Phase I. This monitoring event shall be conducted 60 days after the shutdown of the Chemical Plant and cessation of discharge of any OCPSF regulated wastewaters.

J. PERMIT REOPENER CLAUSE

In accordance with LAC 33:IX.2903, this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit; or
3. Require reassessment due to change in 303(d) status of waterbody; or
4. Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

K. STORMWATER DISCHARGES

Stormwater discharges are covered under the Multi-Sector General Permit, LAR05M243, reissued on May 23, 2006.

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Should coverage under the Multi-Sector General Permit be canceled at any time, the permittee shall submit a request in writing to modify the permit to include additional stormwater outfalls and any additional stormwater requirements current at the time.

L. DISCHARGE MONITORING REPORTS

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1 or an approved substitute). All monitoring reports must be retained for a period of at least three (3) years from the date of the sample measurement. The permittee shall make available to this Department, upon request, copies of all monitoring data required by this permit.

If there is no discharge during the reporting period, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report for that outfall.

Monitoring results for each reporting period shall be summarized on a Discharge Monitoring Report (DMR) Form (one DMR form per monitoring period per outfall) and submitted to the Office of Environmental Compliance either hand delivered, postmarked, electronically submitted in accordance with LAC 33:I.2101.A no later than the 15th day of the month following each reporting period.

1. For parameter(s) with monitoring frequencies of 1/month or more frequent (i.e. continuous, 1/batch, 1/discharge event, 1/day, 3/week, 2/week, 1/week, 2/month, etc.), DMRs shall be submitted in accordance with the following schedule:

Submit DMR postmarked by the 15th day of the following month.

2. For parameter(s) that require a monitoring frequency of 1/2 months, DMRs shall be submitted in accordance with the following schedule:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January 1 - February 28(29)	March 15th
March 1 - April 30	May 15th
May 1 - June 30	July 15th
July 1 - August 31	September 15th
September 1 - October 31	November 15th
November 1 -December 31	January 15th

3. For parameter(s) that require a monitoring frequency of quarterly, DMRs shall be submitted in accordance with the following schedule:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January, February, March	April 15th
April, May, June	July 15th

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July, August, September	October 15th
October, November, December	January 15th

4. For parameter(s) that require a semiannual monitoring frequency, DMRs shall be submitted in accordance with the following schedule:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January - June	July 15th
July - December	January 15th

5. For parameter(s) that require an annual monitoring frequency, DMRs shall be submitted in accordance with the following schedule:

<u>Monitoring Period</u>	<u>DMR Postmark Date</u>
January-December	January 15th

If not submitting electronically, duplicate copies of DMRs (one set of originals and one set of copies) signed and certified as required by LAC 33:IX.2503, and all other reports (one set of originals) required by this permit shall be submitted to the Permit Compliance Unit at the following address:

Department of Environmental Quality
 Office of Environmental Compliance
 Permit Compliance Unit
 Post Office Box 4312
 Baton Rouge, Louisiana 70821-4312

M. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or the designated agent to manipulate test samples in any manner, to delay shipment, or to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by the Louisiana Department of Environmental Quality.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

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OTHER REQUIREMENTS (continued)

APPLICABLE TO OUTFALL(S): 001

CRITICAL DILUTION: Phase I - 8%
 Phase II - 7%

EFFLUENT DILUTION SERIES: Phase I - 3%, 4%, 6%,
 8%, and 10%
 Phase I - 3%, 4%, 5%,
 7%, and 9%

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136 (See LAC
 33:IX.4901)

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA 821-R-02-013 or the most recent update thereof. This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA 821-R-02-013, or the most recent update thereof. A minimum of five (5) replicates with ten (10) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The survival NOEC (No Observed Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. The NOEC for growth or reproduction is defined as the greatest effluent dilution at and below which sub-lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
- d. Lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

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OTHER REQUIREMENTS (continued)

2. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

The requirements of this section apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution.

If any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the term of the permit.

- a. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates statistically significant lethal or sub-lethal toxic effects at the critical dilution or lower effluent dilutions. The additional tests shall be conducted monthly during the next three consecutive months in which discharge occurs to determine if toxicity is persistent or occurs on a periodic basis. The purpose of this testing is to determine whether toxicity is present at a level and frequency that will provide toxic sample results to use in performing a Toxicity Reduction Evaluation (TRE). If no additional test failures occur during the retest monitoring period, the testing frequency will be once per quarter for the term of the permit or until another test failure occurs. The permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- b. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED: If any of the valid additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 6 of this section. The permittee shall notify the Department of Environmental Quality, Office of Environmental Compliance - Permit Compliance Unit in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.
- c. IF ONLY SUB-LETHAL EFFECTS HAVE BEEN DEMONSTRATED: If any two of the three valid additional tests demonstrate significant sub-lethal effects at 75% effluent dilution or lower, the permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements (emphasizing investigations pertaining to sub-lethal toxicity) as specified in Item 6 of this section.

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The permittee shall notify the Department of Environmental Quality, Office of Environmental Compliance - Permit Compliance Unit in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the second failed retest. A TRE concentrating on sub-lethal effects may also be required for failure to perform the required tests.

- d. The provisions of Item 2.a. are suspended upon completion of the two additional tests and submittal of the TRE Action Plan.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods.
- iv. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- v. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- vi. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

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Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA 821-R-02-013, or the most recent update thereof.
- ii. If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test regardless of the NOEC, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.
- iii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA 821-R-02-013, or the most recent update thereof.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness and alkalinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

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- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4. below; and
 - (D) the synthetic dilution water shall have a pH, hardness and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- i. The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from the outfall(s) listed at Item 1.a above. A 24-hour composite sample consists of a minimum of 4 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.
- ii. The permittee shall collect second and third 24-hour composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iii. The permittee must collect the 24-hour composite samples so that the maximum holding time for any effluent sample

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shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled between 0 and 6 degrees Centigrade during collection, shipping and/or storage.

- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

4. REPORTING

- a. A valid test must be completed and test results must be submitted for each species during each Monitoring Period. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA 821-R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of Part III.C.3 of this permit. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review. The permittee shall submit the first full report to the following address:

Department of Environmental Quality
Office of Environmental Compliance
Enforcement Division
P.O. Box 4312
Baton Rouge, Louisiana 70821-4312
Attn: Permit Compliance Unit

- b. The permittee shall submit the results of each valid toxicity test on the DMR for that Monitoring Period in accordance with Part III.D and the DMR Monitoring Period schedule contained in

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Part II of this permit. Submit retest information clearly marked as such on the DMR for the Monitoring Period in which the retest occurred. Only results of valid tests are to be reported on the DMR. The permittee shall submit Tables 1 and 2 summary sheets (under Phase I) and Tables 3 and 4 summary sheets (under Phase II) with each valid test.

i. Pimephales promelas (Fathead Minnow)

- (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP6C.
- (B) Report the NOEC value for survival, Parameter No. TOP6C.
- (C) Report the NOEC value for growth, Parameter No. TPP6C.
- (D) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6C.
- (E) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C.

ii. Ceriodaphnia dubia

- (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B.
- (B) Report the NOEC value for survival, Parameter No. TOP3B.
- (C) Report the NOEC value for reproduction, Parameter No. TPP3B.
- (D) If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B.
- (E) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B.

iii. The permittee shall report the following results for all VALID toxicity retests on the DMR for that Monitoring Period.

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- (A) Retest #1 (STORET 22415): If the first monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Retest #1 (STORET 22418): If the first monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the critical dilution, report a "1"; otherwise report a "0".

- (B) Retest #2 (STORET 22416): If the second monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Retest #2 (STORET 22419): If the second monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the critical dilution, report a "1"; otherwise report a "0".

- (C) Retest #3 (STORET 51443): If the third monthly retest following failure of a routine test for either test species results in an NOEC for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Retest #3 (STORET 51444): If the third monthly retest following failure of a routine test for either test species results in an NOEC for growth or reproduction that is less than the critical dilution, report a "1"; otherwise report a "0".

If, for any reason, a retest cannot be performed during the Monitoring Period in which the triggering routine test failure is experienced, the permittee shall report it on the following Monitoring Period's DMR, and the comments section of the DMRs shall be annotated to that effect. If retesting is not required during a given Monitoring Period, the permittee shall leave these DMR fields blank.

The permittee shall submit the toxicity testing information contained in Tables 1 and 2 (under Phase I) and 3 and 4 (under Phase II) of this permit with the DMR subsequent to each and every toxicity test Monitoring Period. The DMR and the summary tables should be sent to the address indicated in 4.a.

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5. MONITORING FREQUENCY REDUCTION

- a. Upon successfully passing the first four quarters of WET testing after permit issuance/reissuance and in the absence of subsequent lethal and/or sublethal toxicity for one or both test species at or below the critical dilution, the permittee may apply for a testing frequency reduction. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than once per six months for the more sensitive test species (usually the *Ceriodaphnia dubia*). Monitoring frequency reduction shall not apply to monitoring frequencies of once per year.
- b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in Item 3.a. above. In addition, the permittee must provide a list with each test performed including test initiation date, species, NOEC's for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance Unit to update the permit reporting requirements.
- c. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the Monitoring Frequency/Monitoring Period for both test species reverts to once per quarter until the permit is re-issued.
- d. LETHAL AND/OR SUB-LETHAL FAILURES - If any test fails the lethal and/or sub-lethal endpoint at any time during the term of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is reissued. Monthly retesting is not required if the permittee is performing a TRE.

6. TOXICITY REDUCTION EVALUATION (TRE)

- a. The permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE for the following:
 - i. If lethal effects have been demonstrated within (90) days of confirming lethality in any retest; or

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- ii. If only sub-lethal effect have been demonstrated within (90) days of confirming sub-lethality at 75% effluent dilution or lower in any two out of three retests.

The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent requirements and/or chemical-specific limits by reducing an effluent's toxicity (includes sub-lethal toxicity, if applicable) to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent lethal and/or sub-lethal toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent lethal and/or sub-lethal toxicity at the critical dilution and include the following:

- i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

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U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

- ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;
Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;
 - iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
 - c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
 - i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent lethal and/or sub-lethal toxicity;
 - ii. any studies/evaluations and results on the treatability of the facility's effluent lethal and/or sub-lethal toxicity; and
 - iii. any data which identify effluent toxicity control mechanisms that will reduce effluent toxicity to active

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compliance with permit biomonitoring requirements and/or chemical-specific limits.

The TRE Activities Report shall be submitted to the following addresses:

Department of Environmental Quality
Office of Environmental Compliance
Enforcement Division
P.O. Box 4312
Baton Rouge, Louisiana 70821-4312
Attn: Permit Compliance Unit

U.S. Environmental Protection Agency, Region 6
Water Enforcement Branch, 6 EN-WC
1445 Ross Avenue
Dallas, Texas 75202

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality and/or sub-lethality (if applicable) in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in the permittee achieving compliance with permit biomonitoring requirements and/or chemical-specific limits. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the above addresses.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. LDEQ recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. At the end of the TRE, LDEQ will consider all information submitted and establish appropriate controls to prevent future toxic discharges, including WET and/or chemical-specific limits per state regulations at LAC 33:IX.2707.D.1.e.

TIN, Inc. d/b/a Temple-Inland
Bogalusa Paperboard Mill
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Table 1 (continued)

3. Are the test results to be considered valid? ☐ Yes ☐ No
If X no (test invalid), what reasons for invalidity?
4. Is this a retest of a previous invalid test? ☐ Yes ☐ No
Is this a retest of a previous test failure? ☐ Yes ☐ No
5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Ceriodaphnia:
- a. NOEC SURVIVAL = % effluent
- b. NOEC REPRODUCTION = % effluent

TABLE 2
SUMMARY SHEET

TIN, Inc. d/b/a Temple-Inland
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Table 2 (continued)

3. Are the test results to be considered valid? _____ Yes _____ No
If X no (test invalid) , what reasons for invalidity?
4. Is this a retest of a previous invalid test? _____ Yes _____ No
Is this a retest of a previous test failure? _____ Yes _____ No
5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Pimephales:
- a. NOEC SURVIVAL = _____ % effluent
- b. NOEC GROWTH = _____ % effluent

TABLE 3
SUMMARY SHEET
Ceriodaphnia dubia SURVIVAL AND REPRODUCTION TEST

PERMITTEE: TIN, Inc. d/b/a Temple-Inland
 FACILITY SITE: Bogalusa Paperboard Mill
 LPDES PERMIT NUMBER: LA0007901, AI No. 38936
 OUTFALL IDENTIFICATION: 001
 OUTFALL SAMPLE IS FROM _____ SINGLE _____ MULTIPLE DISCHARGE
 BIOMONITORING LABORATORY: _____
 DILUTION WATER USED: _____ RECEIVING WATER _____ LAB WATER
 CRITICAL DILUTION 7 % DATE TEST INITIATED _____

1. LOW-FLOW LETHALITY:

Is the mean survival at 7 days significantly less ($p=0.05$) than the control survival at the low-flow or critical dilution? _____ Yes _____ No

PERCENT SURVIVAL - Ceriodaphnia

TIME OF READING	PERCENT EFFLUENT					
	0 %	3%	4%	5%	7%	9%
24-HOUR						
48-HOUR						
7-DAY						

2. LOW-FLOW SUB-LETHALITY:

Is the mean number of young produced per female at 7 days significantly less ($p=0.05$) than the control's number of young per female for the low-flow or critical dilution? _____ Yes _____ No

NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS - Ceriodaphnia

REPLICATE	PERCENT EFFLUENT					
	0 %	3%	4%	5%	7%	9%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Mean No. of young						
CV%*						

* Coefficient of variation = Standard Deviation * 100/mean

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Table 3 (continued)

3. Are the test results to be considered valid? ☐ Yes ☐ No
If X no (test invalid), what reasons for invalidity?
4. Is this a retest of a previous invalid test? ☐ Yes ☐ No
Is this a retest of a previous test failure? ☐ Yes ☐ No
5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Ceriodaphnia:
- a. NOEC SURVIVAL = % effluent
- b. NOEC REPRODUCTION = % effluent

TABLE 4
SUMMARY SHEET

TIN, Inc. d/b/a Temple-Inland
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Table 4 (continued)

3. Are the test results to be considered valid? ☐ Yes ☐ No
If X no (test invalid), what reasons for invalidity?
4. Is this a retest of a previous invalid test? ☐ Yes ☐ No
Is this a retest of a previous test failure? ☐ Yes ☐ No
5. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for Pimephales:
- | | | |
|------------------|---|---------------------------------|
| a. NOEC SURVIVAL | = | <input type="text"/> % effluent |
| b. NOEC GROWTH | = | <input type="text"/> % effluent |